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## **I. INTRODUCTION**

Pursuant to Local Patent Rule 4-5(a), Plaintiff Net Navigation Systems, LLC (“Net Navigation”) submits its opening brief regarding the construction of 17 terms in the following patents: U.S. Patent No. 5,901,147 (“the ‘147 patent”) (Ex. A)<sup>1</sup>; U.S. Patent No. 6,307,860 (“the ‘860 patent”) (Ex. B); U.S. Patent No. 6,434,145 (“the ‘145 patent”) (Ex. C); and U.S. Patent No. 6,625,122 (“the ‘122 patent”) (Ex. D). The inventions described in the patents-in-suit were developed at MMC Networks Inc. and Applied Micro Circuits Corp. (“AMCC”), which acquired MMC. MMC was an early innovator of network processors for use in networking equipment (such as switches and routers) that are responsible for delivering information across computer networks, such as the Internet.

Net Navigation has proposed constructions that assist the jury by providing useful meanings for technical claim terms, and that are consistent with the full scope of those terms as understood by those skilled in the art. The proposed constructions of defendants Cisco Systems, Inc., and AT&T Inc. (“Defendants”), on the other hand, improperly attempt to rewrite the claims with new limitations, or assign definitions that are not consistent with the ordinary meaning of the disputed terms. The Court should therefore adopt Net Navigation’s constructions and reject Defendants’ proposed constructions.

## **II. ARGUMENT**

### **A. Legal Standard**

The purpose of claim construction is to “determin[e] the meaning and scope of the patent claims asserted to be infringed.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff’d* 517 U.S. 370 (1996). Claim construction is a question of law for the Court. *Id.* at 979. Intrinsic evidence (*i.e.*, the patent claim language, specification, and prosecution history) is the primary source of guidance as to the meaning of the claim terms. *See*

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<sup>1</sup> All references to “Ex.” Refer to the exhibits attached to the Declaration of Brian H. VanderZanden in Support of Net Navigation’s Opening Markman Brief, filed contemporaneously herein.

*Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582–83 (Fed. Cir. 1996). However, “the claim construction inquiry . . . begins and ends in all cases with the actual words of the claim.”

*Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998).

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Claim terms are generally given “their ordinary and customary meanings, according to the customary understanding of an artisan of ordinary skill at the time of the invention.” *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1328 (Fed. Cir. 2008). “The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Phillips*, 415 F.3d at 1316 (internal quotations omitted).

It is improper to read in a limitation from the specification. The Federal Circuit has cautioned that “courts cannot alter what the patentee has chosen to claim as his invention, that limitations appearing in the specification will not be read into claims, and that interpreting what is meant by a word in a claim is not to be confused with adding an extraneous limitation appearing in the specification, which is improper.” *Intervet Am., Inc. v. Kee-Vet Labs., Inc.*, 887 F.2d 1050, 1053 (Fed. Cir. 1989) (internal quotations omitted). Furthermore, “a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.” *SuperGuide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

Non-technical terms often do not require elaborate interpretation. *See Brown v. 3M*, 265 F.3d 1349, 1352 (Fed. Cir. 2001). The construction of non-technical terms “is unhelpful and may cause jury confusion. . . .” *Fractus, S.A. v. Samsung Elecs. Co.*, 2010 U.S. Dist. LEXIS 134502, \*91 (E.D. Tex. 2010). In such cases, no construction is necessary. *Id.*; *see also*

*HowLink Global LLC v. Centris Info. Sys., LLC*, 2012 U.S. Dist. LEXIS 123689, \*17-18 (E.D. Tex. 2012).

**B. U.S. Patent No. 5,901,147**

**1. Technical Background of the ‘147 Patent<sup>2</sup>**

The invention of the ‘147 patent relates to the controlling of congestion in network devices such as switches and routers. ‘147 patent, col. 1:7-9.

Network devices receive and transmit information, or data, as data is sent throughout the network. Network devices receive data through “input ports,” and transmit data out “output ports.” When a network device is unable to transmit data to a downstream device before more data arrives, the network device stores the data in a type of memory called a “queue” while it awaits subsequent delivery. *Id.* at col. 1:10-14. Network devices would often have a separate queue for each output port. *Id.* at col. 1:15-16. A problem that typically occurred is that when a queue fills up with data, the incoming data received on the input port would be discarded, or “dropped.” *Id.* One solution to this problem was to use “shared memory” across all of the queues, so that any given queue could take more than its proportionate share of the memory, provided that one or more other queues took less memory than its proportionate share. *Id.* at col. 1:20-24. The problem with using shared memory, however, is that a long queue can take up the entire shared memory, leaving no space for other queues. *Id.* at col. 1:24-26.

The ‘147 patent solves this problem through the use of “thresholds” that limit the amount of data that a given queue can hold at a given time. *Id.* at col. 1:26-42. The invention of the ‘147 patent allows these thresholds to change depending on the network congestion. *Id.* at col. 1:38-42. In one embodiment, a “region ID” identifies the region containing the current amount of data in the queues. *Id.* at col. 12:47-14:22. The threshold is then determined from the region ID. *Id.* In this embodiment, the threshold is changed when the region ID changes so that the threshold

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<sup>2</sup> The parties will be submitting technical tutorials to the Court on October 19, 2012, that will include further background and description relating to the patents-in-suit and the relevant technology.



changes inversely depending on the amount of data in the queues. *Id.* at col. 12:47-14:22. As a result, when the total amount of data *increases*, the thresholds that limit the amount of data that a given queue can hold at a given time *decrease*. *Id.* at col. 1:38-42.

One embodiment of the ‘147 patent describes a particular type of network device, known as an asynchronous transfer mode switch, or “ATM” switch. *Id.* at col. 1:7-9. The specification and claims of the ‘147 patent makes clear, however, that the invention is not limited solely to ATM switches, but is instead applicable to controlling network congestion in all manner of network devices. ‘147 patent, col. 27:15-20 (“The embodiments described above illustrate but do not limit the invention. The invention is not limited by any particular circuitry, signals, data structures, the number of queues or thresholds, or values of any parameters. Other embodiments and variations are within the scope of the invention, as defined by the appended claims.”).

Net Navigation is asserting independent claims 1, 29, and 31 of the ‘147 patent, each of which is implicated by one or more of the disputed terms.

**2. Disputed Terms: Preambles of claims 1, 29, and 31 / “network routing apparatus” / “network data”**

<b>Claim Term</b>	<b>Net Nav.’s Proposed Constr.</b>	<b>Defendants’ Prop. Constr.</b>
Preambles of claims 1, 29, and 31	Preambles are not limiting; to the extent they are, only claim 1 is limited to processing ATM cells in an ATM switch	Preambles are limitations, and limited to processing of ATM cells in an ATM switch
network routing apparatus	Appears only in preambles of claims 29 and 31; not a claim limitation, no construction necessary. Alternatively, “a device for forwarding data in a network”	invalid under §112 ¶ 1, or “a switch that operates on ATM cells” (same as “ATM switch”)
network data	No construction necessary – plain and ordinary meaning. Alternatively, “information transmitted in a network”	Invalid under §112 ¶ 1, or “fixed size segments of information used in an ATM network, each having a header field and a payload field” (same as “cells”)

The parties’ disputes (both as to limiting effect of the preambles, and to the proper construction of the terms “network routing apparatus” and “network data”) center on

Defendants' attempt to limit all three asserted claims to cover only ATM switches. Critically, while claim 1 specifically mentions ATM switches, claims 29 and 31 decidedly do not. As a result, Defendants' proposed constructions of the terms "network routing apparatus" and "network data" would improperly read a limitation from the specification into claims 29 and 31. Defendants' attempt to improperly limit claims 29 and 31 to cover only ATM switches should be rejected for at least the following reasons:

As an initial matter, the preambles of claims 1, 29 and 31 are not limiting. The Federal Circuit has held that "a preamble is not limiting where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (internal quotations and citation omitted). Here, the preambles use classic purposive language, and recite no essential structure that does not appear in the bodies of the claims. Claim 1, for example, includes the preamble "A method for processing cells in an ATM switch, the method comprising:..." '147 patent at Cl. 1. The parties have agreed, however, that the term "cells", which appears throughout claim 1, is limited to ATM switches. Thus, claim 1 is limited to ATM switches **regardless** of whether the preamble is found to be limiting. There is therefore no essential structure in the preamble of claim 1 that does not appear in the body of the claims. Likewise, the preamble to claim 29 ("A method for processing network data in a network routing apparatus, the method comprising: ....") and the preamble to claim 31 ("A network routing apparatus comprising: ....") also do not include an essential structure that does not appear in the bodies of the claims. For these reasons, the preambles of claims 29 and 31 are similarly not limiting.

As a matter of claim construction, the terms "network routing apparatus" and "network data" do not require construction because they are familiar, non-technical terms with widely accepted meanings, and have been given no specialized meaning in this context. "Network routing apparatus" is a device that routes information/data in a network. Likewise, it is apparent

that “network data” means data used in a network. The Federal Circuit has emphasized that where the ordinary meaning of a term is apparent, claim construction “involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. And, this Court has found that the construction of non-technical terms “is unhelpful and may cause jury confusion. . . .” *Fractus, S.A. v. Samsung Elecs. Co.*, 2010 U.S. Dist. LEXIS 134502, \*91 (E.D. Tex. 2010); *see also Stanacard, LLC v. Rebtel Networks, AB*, 680 F. Supp.2d 483, 487-88 (S.D.N.Y. 2010) (citing cases from several districts in which courts “decline[d] to interpret claim terms where the terms sought to be defined by a party are readily understood”). Accordingly, construing these terms would be inappropriate as their ordinary meaning can be properly understood within the context of the claims.

Second, if the Court *is* inclined to provide constructions for these two terms, Net Navigation’s proposed constructions should be adopted as being consistent with the intrinsic evidence. For example, the ‘147 specification uses the term “data” consistently with “information transmitted in a network”. *See*, ‘147 patent, at col. 3:9 (“FIG. 33 illustrates flow of data in the switch of FIG. 25.”); col. 20:7-8 (“FIG. 27 illustrates the flow of data between blocks of FIG. 25.”); col. 22:7-9 (“SIF 1420 and PVC 1440 decode the command and write data to specified locations in their control memories.”); col. 22:21 (“SIF 1420 reads data from its control memory 1510.”); col. 21: 55-57 (“Each of SIF 1420 and PVC 1440 has a control memory to store data such as data in the tables of FIG. 26.”)

The intrinsic evidence likewise supports a non-limiting construction of “network routing apparatus” as “a device for forwarding data in a network”. *See*, ‘147 patent, col. 27:16-20 (“The invention is not limited by any particular circuitry, signals, data structures, the number of queues or thresholds, or values of any parameters. Other embodiments and variations are within the scope of the invention, as defined by the appended claims.”) Moreover, extrinsic evidence supports a construction of “a device for forwarding data in a network.” *See Cisco Systems’ Dictionary of Internetworking Terms and Acronyms* (Ex. E) at 307 (defining “router” as

“Network layer device that uses one or more metrics to determine the optimal path along which network traffic should be forwarded.”); *Microsoft Internet & Networking Dictionary* (Ex. F) at 223 (defining “router” as “An intermediary device on a communications network that expedites message delivery”); *IBM Dictionary of Computing* (Ex. G) at 588 (defining same as “A computer that determines the path of network traffic flow”); *Webster’s New World Computer Dictionary* (Ex. H) at 453 (defining same as “an intelligent hub (connecting device) that examines each packet of data it receives and then decides which way to send it onward toward its destination.”)

Defendants’ proposed construction, in contrast, improperly limits the scope of claims 29 and 31 to include only one type of network device, ATM switches. While an ATM switch is disclosed in the preferred embodiment, the specification makes clear that the invention of the ‘147 patent is not limited to a particular type of network device. ‘147 patent at col. 27:15-20.

Moreover, the doctrine of claim differentiation dictates that the “network routing apparatus” of claims 29 and 31 be given a different construction than the claimed “ATM switch” of claim 1, and that the “network data” of claims 29 and 31 be given a different construction than the claimed “cells” of claim 1. “The doctrine of claim differentiation create[s] a presumption that each claim in a patent has a different scope.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998)). Defendants’ proposed constructions improperly limits claims 29 and 31 to the same patent scope as claim 1, which flies in the face of what the patentee intended by using different claim terms in these two claims as compared to claim 1. “There is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims. To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between claims is significant.” *Tandon Corp. v. United States Int’l Trade Comm’n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987). Here, the only difference between claims 1 and 29 is the substitution of the claim 1 term “cell” (which the parties agree is ATM-specific) for the claim 29

term “network data”, and the claim 1 term “ATM switch” for the claim 29 term “network routing apparatus.” By limiting “network data” and “network routing apparatus” to ATM switches, Defendants’ proposed construction makes claim 29 superfluous. “Courts do not rewrite claims; instead, we give effect to the terms chosen by the patentee.” *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed. Cir. 1999). Here, the Court should give effect to the terms chosen by the patentee of the ‘147 patent, and reject Defendants’ proposal that the terms “network data” and “network routing apparatus” be limited to ATM switch embodiments.

Lastly, Defendants’ proposed construction suggests that “network data” and “network routing apparatus” should be found invalid for lack of enablement under 35 U.S.C. §112 ¶ 1. Pursuant to 35 U.S.C. § 112 ¶ 1, the specification must enable those skilled in the art to make and use the full scope of the claimed invention without undue experimentation. *Harris Corp. v. IXYS Corp.*, 114 F.3d 1149, 1155 (Fed. Cir. 1997). Courts presume the specification enables the claims, and the party alleging invalidity for lack of enablement must show by clear and convincing evidence that the specification does not enable the claims to prevail. *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1318 (Fed. Cir. 2007). Enablement is a question of law based on underlying facts. *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008). “Whether the specification enables the claimed invention is a highly factual inquiry that requires the Court to determine (1) the level of skill in the art and the knowledge an ordinarily-skilled artisan possessed when the inventors filed the applications that matured into the Patents-in-Suit; (2) the full scope of the claimed invention; and (3) the level of experimentation that constitutes undue experimentation.” *Reedhycalog UK, Ltd. v. United Diamond Drilling Servs.*, 6:07-cv-251, 2009 U.S. Dist. LEXIS 32959, \*30-31 (E.D. Tex. Apr. 15, 2009) (J. Davis).

As an initial matter, a determination on the issue of enablement is premature at this juncture. This Court has repeatedly found that the claims must be construed *before* the Court can render an opinion on enablement. “The enablement inquiry implicates claim construction, and courts first construe the asserted claims before determining whether the specification enables

those claims.” *Reedhycalog UK, Ltd. v. United Diamond Drilling Servs.*, 6:07-cv-251, 2009 U.S. Dist. LEXIS 32959, \*30-31, fn. 11 (E.D. Tex. Apr. 15, 2009) (J. Davis); *see also*, *LG Elecs. Inc. v. Hitachi, Ltd.*, 5:07-cv-90, 2008 U.S. Dist. LEXIS 108377, \*62-63 (E.D. Tex. Dec. 8, 2008) (J. Folsom) (refusing to reach a decision on enablement at the claim construction phase); *800 Adept, Inc. v. AT&T Mobility, LLC*, 5:07-cv-23, 5:07-cv-57, 2008 U.S. Dist. LEXIS 93179, \*65 (E.D. Tex. July 23, 2008) (M.J. Craven) (same); *Cybergym Research, LLC v. Icon Health & Fitness, Inc.*, 2:05-cv-527, 2007 U.S. Dist. LEXIS 102197, \*16 (E.D. Tex. Sept. 4, 2007) (J. Folsom) (holding that “the issues of indefiniteness and enablement are best addressed by motion for directed verdict or by post-trial motion.”)

Even if the Court were inclined to reach a decision on the issue of enablement, Defendants cannot meet their burden of proving, by clear and convincing evidence that claims 29 and 31 are not enabled. Defendants’ position is that, were the Court to construe claims 29 and 31 to read on network devices other than ATM switches, the claims would be invalid for the reason that other network devices are not disclosed. This argument must be rejected; however, as the ‘147 patent specification explicitly states that the invention *is not limited* to ATM switches. ‘147 patent, col. 27:15-20 (noting other embodiments are intended by the claims). Moreover, Defendants have provided Net Navigation with no evidence concerning the level of skill in the art at the time of the ‘147 patent, or the level of experimentation that constitutes undue experimentation. *Reedhycalog*, 6:07-cv-251, 2009 U.S. Dist. LEXIS 32959, \*30-31 (J. Davis) (finding that defendants’ failure to provide evidence addressing such issues precluded a finding of lack of enablement). Significantly, Defendants have presented no evidence suggesting that the problems associated with the use of shared memory addressed by the invention of the ‘147 patent were unique to ATM switches.

In sum, the Court should reject the Defendants’ invitation to limit claims 29 and 31 of the ‘147 patent to ATM switches, and should either decline to construe the terms “network routing apparatus” and “network data,” or construe them consistently with their plain and ordinary

meaning of “a device for forwarding data in a network” and “information transmitted in a network”, respectively.

**3. Disputed Terms: “in order to control congestion of the [switch/apparatus]”**

<b>Claim Term</b>	<b>Net Nav.’s Proposed Constr.</b>	<b>Defendants’ Prop. Constr.</b>
in order to control congestion of the [switch/apparatus]	Plain and ordinary meaning alternatively, in order to control excess network traffic of the switch / in order to control excess network traffic of the apparatus	[in order to control] the total [amount of data / number of cells] out of the total capacity of the [switch / apparatus]

The parties’ dispute concerning the claim term “in order to control congestion of the [switch/apparatus]” boils down to whether or not it should be given its plain and ordinary meaning, as Net Navigation proposes, or whether the term “congestion” should be replaced with the confusing “the total [amount of data / number of cells] out of the total capacity”, as Defendants propose. The Court should give this term its plain and ordinary meaning for at least the following reasons:

First, this term does not require construction because it is a familiar, non-technical term with a widely accepted meaning, and has been given no specialized meaning in this context. The Federal Circuit in *Phillips* emphasized that where the ordinary meaning of a term is apparent, claim construction is unnecessary. *Phillips*, 415 F.3d at 1314. This Court has often agreed and found construction of non-technical terms to be counterproductive. *See e.g., Fractus, S.A. v. Samsung Elecs. Co.*, 2010 U.S. Dist. LEXIS 134502, \*91 (E.D. Tex. 2010). Here, the term “congestion” is used in a familiar, non-technical context, and has not been given a specialized meaning. Any formal construction would not be helpful, and may cause jury confusion.

Second, the intrinsic evidence supports a construction which adopts the plain and ordinary meaning. *See e.g.*, ‘147 patent, title (“Apparatus And Methods To Change Thresholds To Control Congestion In ATM Switches”); *id.* at abstract (“In an ATM switch, queue thresholds vary dynamically depending on switch congestion.”); *id.* at col. 1:7-9 (“The present invention

relates to networks, and more particularly to controlling congestion in ATM switches in networks.”); *id.* at col. 1:33-34 (“It is desirable to find alternative circuits and methods for handling the switch congestion.”); *id.* at col. 12:2 (“This function handles congestion in the ATM switch.”)

Third, to the extent that the term “congestion” requires a construction, extrinsic evidence supports construing this term as “excess network traffic.” Significantly, Cisco’s own dictionary defines “congestion” as “Traffic in excess of network capacity.” *Cisco Systems’ Dictionary of Internetworking Terms and Acronyms* (Ex. E) at 80; *see also Microsoft Internet & Networking Dictionary* (Ex. F) at 50 (defining “congestion” as “The condition of a network when the current load approaches or exceeds the available resources and bandwidth designed to handle that load at a particular location in the network. Packet loss and delays are associated with congestion.”); *Newton’s Telecom Dictionary* (Ex. I) at 148 (defining “congestion management” as “The ability of a network to effectively deal with heavy traffic volumes; solutions include traffic scheduling and enabling output ports to control the traffic flow.”).

Fourth, Defendants’ proposed construction improperly inserts the limitation “the total [amount of data / number of cells] out of the total capacity” into the claim language. This construction is neither helpful nor warranted. If the patentee had wished to add the limitation “the total [amount of data / number of cells] out of the total capacity” into the claims, he could have easily done so. “Courts do not rewrite claims; instead, we give effect to the terms chosen by the patentee.” *K-2 Corp.*, 191 F.3d at 1364. Defendants’ attempt to add a limitation into the claims should be rejected for what it is – an improper attempt to limit the scope of the patent in a manner expressly not considered by the patentee.

For all of these reasons, the Court should adopt the plain and ordinary meaning of “in order to control congestion of the [switch/apparatus]”, or alternatively, adopt a construction of “congestion” as “excess network traffic”.



**C. U.S. Patent No. 6,307,860**

**1. Technical Background of the '860 Patent**

The invention of the '860 patent relates to processing and transforming information sent in a computer network devices. '860 patent, col. 1:16-18. In particular, it relates to a system that uses circuits and processors to transform information pursuant to directions from other circuits and processors in a network router or a network switch.

Network routers and network switches are generally responsible for receiving information from one part of a network and sending that information to another part of a network. However, these devices may also change or transform the information before sending the information further along the network. For example, routers may sometimes replace one address associated with a piece of information with another address. *Id.* at col 2:1-3. This is somewhat similar to the U.S. Post Office receiving a letter addressed to an old address, realizing the addressee had moved, and replacing the address label on the letter with a new address.

At the time of the invention of the '860 patent, some processors were hardwired for specific tasks, protocols, and standards. *Id.* at col 1:38-45. At the time of the invention of the '860 patent, these types of processors and circuits were generally fast, but limited in that they could not perform a wide range of tasks, protocols, and standards beyond what they were hardwired for. *Id.* Contrawise, at this time there also existed other processors that were configurable to process network data using a variety of different tasks, protocols, and standards. *Id.* at col 1:46-52. Although more adaptable, these processors and circuits were typically slower than the hardwired processors and circuits. *Id.*

The '860 patent solves this speed versus flexibility problem through the use of multiple processors and circuits. One processor or circuit is responsible for determining how the network data should be transformed. *Id.* at col 1:65-66. Another processor or circuit is responsible for transforming the data according to directions from the first processor. *Id.* at col 1:66 – 2:1. As such, in one embodiment, the processor or circuit responsible for determining how the network data should be transformed can be one of the reconfigurable processors, allowing the system to

be adaptable. *Id.* at col 2:6-9. The processor or circuit responsible for actually transforming the data can be a fast, hard-wired processor or circuit, allowing the system as a whole to be faster and less costly. *Id.* at col 2:9-18. The specification and claims of the ‘860 patent makes clear, however, that the invention is not limited to the any disclosed embodiment, but is instead defined by the claims. *Id.* at col 2:41-42 (“Other embodiments and variations are described below. The invention is defined by the appended claims.”)

Net Navigation is asserting independent claims 1 and 34 of the ‘860 patent, each of which is implicated by one or more of the disputed terms.

## 2. Disputed Terms: “First Circuit” and “First Processor”

Claim Term	Net Nav.’s Proposed Constr.	Defendants’ Prop. Constr.
first circuit	Plain and ordinary meaning; no construction necessary  Alternatively, “a circuit denoted as ‘first circuit’ for purposes of this claim”	a circuit that determines how data are to be transformed for transmission
first processor	Plain and ordinary meaning; no construction necessary  Alternatively, “a processor denoted as ‘first processor’ for purposes of this claim”	a processor that determines how data are to be transformed for transmission

The parties have agreed that the “processor” should be “a device capable of performing an operation or combination of operations on data.” The parties also agreed that the term “circuit” should be “an interconnected set of electrical components.” These agreed constructions are consistent with the plain and ordinary meaning of the terms. The asserted claims of the ‘860 Patent relate to multiple circuits and/or processors that work together in order to implement the invention described in the ‘860 Patent. For example, claim 1, relating to the terms “first circuit” and “second circuit” recites, in relevant part:

A network processor system comprising:  
  
a circuit C1 for receiving network data units . . . ;

a **first circuit** operable to execute computer instructions . . . (iv) generate commands specifying how the data units are to be transformed. . . and

a **second circuit** for reading the commands from the memory and executing the commands to transfer the data units to the network port or the network switch. . .

wherein the circuit C1 is operable to write a data unit into the first queue in parallel with the **first circuit** executing said computer instructions and in parallel with the **second circuit** executing said commands.

(‘860 patent at claim 1; the term “second circuit” is also disputed, and addressed further below).

Claim 1 recites three circuits: circuit C1, a first circuit, and a second circuit. Net Navigation’s proposed constructions properly recognize that a claim reciting three circuits will require different identifiers in order to specify which circuit in particular is referenced in subsequent claim limitations and in the dependent claims. Here, the words “first” and “second” merely serve to distinguish one circuit from another circuit as recited in the claims. The term “first processor,” in Claim 34, presents the same situation.<sup>3</sup>

Defendants’ proposed construction is potentially confusing to the jury because their language is similar to, but not the same as, other language recited in the claims. For example, in Claim 1, the claim language describing the “first circuit” states that it “generat[es], in response to

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<sup>3</sup> Claim 34, includes the terms “first processor” and “second processor,” stating:

A method for processing a flow of network data flowing to or from a network via a network port of an apparatus which receives and transmits network data, wherein the network data received or transmitted on the network port comprise first address information, the method comprising:

writing the network data to a first FIFO;

obtaining, by a **first processor** programmed with software prepared before the first processor begins operation, at least a portion of the first address information from the network data, and determining, by the first processor, whether and how the first address information is to be modified in order to deliver the network data to the data's destination;

based on said determining whether and how the first address information is to be modified, the first processor writing, to a second FIFO, commands specifying whether and how the network data is to be modified; and

a **second processor** reading the commands from the second FIFO and executing the commands to modify the network data.

(Exh. B at claim 34). Just as Claim 1 recites more than one circuit, so also does Claim 34 recite more than one processor. The words “first,” and “second” again distinguish one processor from another.

the requests, commands defining whether and *how the data in the first flow are to be transformed and sequentially transmitted* outside of the network processor system.”

Furthermore, the construction does not include other limitations in the claims relating to the terms “first circuit” and “first processor.” In short, although Defendants’ construction does not appear to substantively alter the scope of the claims, the construction will likely create juror confusion as to claim scope by using different words to express limitations already in the claims and by excluding other limitations relating to the terms appearing in the claims. As such, Defendants’ redundant and imprecise restatements of claim language will not aid the jury in this case, should be rejected, and the terms should be given a construction of plain meaning, consistent with decisions on similar terms other cases decided in this District.<sup>4</sup>

### 3. Disputed Terms: “First Circuit,” “Second Circuit,” “First Processor,” and “Second Processor”

Claim Term	Net Nav.’s Proposed Constr.	Defendants’ Prop. Constr.
second circuit	Plain and ordinary meaning; no construction necessary  Alternatively, “a circuit denoted as ‘second circuit’ for purposes of this claim”	A circuit which is not software programmable that is different from the first circuit
second processor	Plain and ordinary meaning; no construction necessary  Alternatively, “a processor denoted as ‘first processor’ for purposes of this claim”	A processor which is not software programmable that is different from the first processor [for reading the commands from the second FIFO and executing the commands to modify the network data]

Net Navigation’s constructions for the terms “second circuit” and “second processor” are correct for the same reasons stated above. The terms “first” and “second” are merely used in the

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<sup>4</sup> In *Biax Corp. v. Sun Microsystems, Inc.*, 2008 U.S. Dist. LEXIS 55101, 13-14 (E.D. Tex. 2008) (J. Everingham) the defendant argued that the terms “first circuit,” “second circuit,” and “access circuit” should be further limited beyond the definition of the term “circuit.” The Court stated, “the term ‘circuit’ is broader than [defendant’s] proposed definitions.” *Id* at 14. The Court gave the term ‘circuit’ a definition consistent with dictionary definitions (in that case, “an assemblage of electronic elements”) and held that “the balance of the terms [i.e. “first circuit,” “second circuit,” and “access circuit”] do not require construction.” *Id*.

claims to distinguish one recited circuit or processor from another subsequently-recited circuit or processor. On the other hand, Defendants' constructions for these terms have a serious flaw: Defendants seek to impose a disfavored, negative limitation—"not software programmable"—based solely on the use of the unrelated word "second" in the claim language.

Courts will not add a negative limitation without clear language disclaiming such coverage in from either the specification or the prosecution history. *See Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003) (refusing application of a negative limitation absent an "express disclaimer or independent lexicography in the written description that would justify adding that negative limitation"); *see also Linear Tech. Corp. v. ITC*, 566 F.3d 1049, 1060 (Fed. Cir. 2009) (reversing claim construction including negative limitations).

Furthermore, Defendants' proposed construction also violates the doctrine of claim differentiation. Under the doctrine of claim differentiation, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Phillips*, 415 F.3d at 1315. Here, the term "second circuit" initially appears in Claim 1. Claim 13, which depends from Claim 1, adds the limitation, "*wherein the second circuit is not programmable with software* prepared before the second circuit begins operation." Defendants' proposed construction ignores the differentiation of the claims and the resulting presumption against their propose construction.

Despite Defendants' arguments to the contrary, nothing in the specification rebuts the strong presumptions against Defendants' proposed constructions based on both the violation of the doctrine of claim differentiation and the use of negative limitations in Defendants' construction. At most, only some embodiments in the specification would meet Defendants' proposed negative limitation. Specifically, in the description of the preferred embodiment, the specification states, "In *some embodiments*, the four channels 150.x are implemented by a single channel circuit that performs the function of the four channels 150 using time division multiplexing. The channel circuit is not software programmable." '860 patent, col. 4:8-12.

However, the specification nowhere states that the second circuit or processor must be a “channel circuit.” Furthermore, the specification itself indicates that it should be read expansively and not limited based on any disclosed embodiment. *Id.* at col. 16:13-22; *see also id.* at 2:42-43. As the Federal Circuit has recently reiterated, it is improper to read a “limitation into the term merely because it is disclosed in *some embodiments*.” *Woodrow Woods & Marine Exhaust Sys., Inc. v. Deangelo Marine Exhaust, Inc.*, 2012 U.S. App. LEXIS 18227 (Ex. L) at \*28 (Fed. Cir. Aug. 28, 2012) (emphasis added). Disclosure that one circuit in one embodiment is not software programmable is insufficient to overcome the presumptions against Defendants’ proposed negative limitation under the doctrine of claim differentiation. *See Arlington Indus. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1256 (Fed. Cir. 2011) (refusing to construe patent as limited by a statement in the specification where the “statement refers to a single embodiment”). Here, description of one embodiment in the specification is insufficient to overcome the presumption against Defendants’ proposed construction. Defendants’ construction is wrong and should be rejected.

#### 4. Disputed Term: Data Flow[s] / Flow[s]

Claim Term	Net Nav.’s Proposed Constr.	Def.’s Proposed Constr.
data flow[s] / flow[s]	stream[s] of data traveling between two devices in a network	an ordered group of related data units

Net Navigation’s proposed construction is consistent with the usage of the term “data flow” in the specification of the ‘860 patent. The ‘860 patent specification’s description of one embodiment generally describes a data flow in a way that implies and is consistent with the flow being a data stream between devices. For example, the ‘860 patent describes one embodiment in which “data between the Ethernet segment and the ATM switch 120 flows through a corresponding MAC.” ‘860 patent, col. 3:9-11. The specification generally refers to incoming data flows (*e.g.*, “data flow from the Ethernet to ATM (the ‘ingress’ flow),” *id.* at col. 3:36-37), and outgoing data flows (*e.g.*, “the egress flow (from ATM to Ethernet),” *id.* at col. 3:47-48) in one embodiment. Defendants’ construction is improper because it seeks to impose a limitation

that the data in the flow be an “ordered group.” There is no requirement, nor even disclosure, of “ordered” data units in the specification. Indeed, the only disclosure in the specification relating to ordering relates to ordering *commands* for the “search machine” element in one embodiment, *not* to “data units.” *Id.* at col. 3:36-37. In short, there is no intrinsic support for Defendants’ proposed construction.

Tellingly, Defendants’ proposed construction conflicts with Defendant Cisco’s own published dictionary definition of the term “flow,” which essentially agrees with Net Navigation’s proposed construction. The *Cisco Systems’ Dictionary* defines a “flow” as “[s]treams of data traveling between two endpoints across a network (for example, from one LAN station to another). Multiple flows can be transmitted on a single circuit.” *Cisco Systems’ Dictionary of Internetworking Terms and Acronyms* (Ex. E) at 146. As such, Defendants’ proposed construction is unsupported by both the specification and by Cisco’s own published definition of the ordinary and customary definition of “flow.” Defendants’ attempt to import a limitation outside the ‘860 patent specification and the ordinary and customary meaning of the term is improper and should be rejected.

**D. U.S. Patent No. 6,434,145**

**1. Technical Background of the ‘145 Patent**

The invention of the ‘145 patent relates to processing information sent in computer network devices. ‘145 patent, col. 1:14. In particular, it relates to a system that uses multiple data processing channels to increase the total amount of data that can be processed by the network device. *Id.* at col. 1:31-33. For example, network routers and network switches have one or more ports that receive information from a network. These ports can receive one or more flows, or streams, of network data. *Id.* at col. 1:36-37. If the network router or network switch has only a single processing channel for processing that data, then the throughput of any stream or of all the streams together cannot exceed the capacity of the single processing channel as a matter of simple arithmetic.

In some embodiments, the ‘145 patent overcomes this problem and allows a network router or a network switch to achieve higher data rates using hardware that processes the information at a slower speed. The ‘145 patent achieves this result in some embodiments by sending the data to more than one processing channels. *Id.* at col. 1:38-41. In these embodiments, higher processing power is realized by using multiple processing channels in parallel as opposed to a single processing channel. *Id.* at col. 1:45-46.

Net Navigation is asserting independent claims 1 and 14 of the ‘145 patent, each of which is implicated by one or more of the disputed terms.

## 2. Disputed Term: Frame

Claim Term	Net Nav.’s Proposed Constr.	Def.’s Proposed Constr.
frame	a grouping of information for transmission (also called a packet)	a data unit for transmitting encapsulated cells or packets

Net Navigation’s construction applies the ordinary and customary definition of the term frame as understood by a person having ordinary skill in the art. For example, Defendant Cisco’s dictionary defines “frame” as a “[l]ogical **grouping of information** sent as a data link layer unit over a **transmission** medium.” *Cisco Systems’ Dictionary of Internetworking Terms and Acronyms* (Ex. E) at 148. Similarly, *Webster’s New World Computer Dictionary* defines the term as “a unit (**packet**) of data that is transmitted via the network.” *Webster’s New World Computer Dictionary* (Ex. H) at 208. Likewise, the *Network Press Dictionary of Networking* states that a frame is “[a] block of data suitable for **transmission** as a single unit, **also referred to as a packet** or block.” *Network Press Dictionary of Networking* (Ex. J) at 138-139. Taken together, these sources all confirm that the ordinary and customary definition of “frame” is “a grouping of information for transmission” and that a frame may also be called a “packet.”

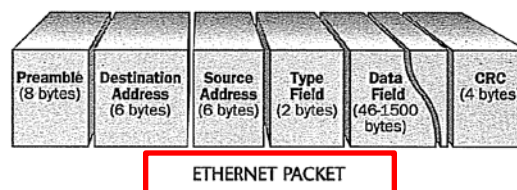
Defendants’ construction implies that the term “frame” cannot include packets. This is incorrect. The patent describes a “LIP bit (Last In **Packet**)” which indicates whether a set of bits includes “the last data byte of a **frame**.” ‘145 patent, col. 10:5-10. Here, the patent describes a bit that signals the end of the *frame*, i.e., the “Last [byte] In [the] Packet” or “Last In Packet.”



As such, the patent uses the terms “frame” and “packet” interchangeably. Furthermore, extrinsic evidence confirms that persons skilled in the art in the field of the ‘145 patent also use the term packet and frames to describe the same structures. For example, the specification describes one embodiment in which one of the data flows is from an Ethernet port. Id. at col. 4:6-11 and 56-58. The definition of “Ethernet” in *Newton’s Telecom Dictionary* depicts an “Ethernet Frame”:

AN ETHERNET FRAME					
Preamble	Destination address	Source address	Type	Data up to 1500 bytes	Frame check sequence
8 bytes	6 bytes	6 bytes	2 bytes	bytes	4 bytes (contains CRC check)

*Newton’s Telecom Dictionary* (Ex. I) at 231. This exact same structure, having the same fields and field lengths, is depicted in the *Network Press Dictionary of Networking* as an “Ethernet Packet”:



*Network Press Dictionary of Networking* (Ex. J) at 120. As such, the extrinsic evidence confirms that persons skilled in the art may use the terms “frame” and “packet” interchangeably in at least some instances.

Defendants’ proposed construction is also incorrect because it uses the plural terms “cells” and “packets” as being encapsulated in a frame. It was well known in the art at the time of the ‘145 patent that a frame would often encapsulate a single packet, as shown below:

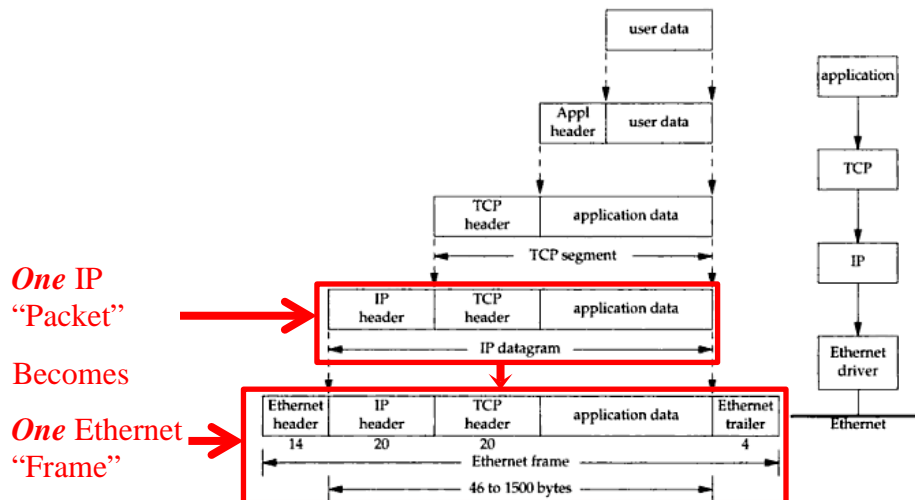


Figure 1.7 Encapsulation of data as it goes down the protocol stack.

W. Richard Stevens, TCP/IP ILLUSTRATED (Vol. 1, 1994) (Ex. K) at 10 (explanatory additions in red).<sup>5</sup> Despite the plain and customary understanding of persons skilled in the art that a “frame” can encapsulate one “packet,” and despite the fact that the ‘145 Patent contains no statements excluding a frame containing a single “cell” or “packet,” Defendants’ use of the plural terms “cells” and “packets” in their construction would require that a frame encapsulate *multiple* cells or packets. The patent nowhere requires encapsulation of multiple cells or packets. To the contrary, the patent contemplates Ethernet framing, and Ethernet framing often encapsulates a single packet. As such, Defendants’ proposed construction is contrary to the intrinsic record and technology. Further, the Defendants’ construction is imprecise, inaccurate, and should be rejected.

### 3. Disputed Term: processing data in parallel by two or more of the processing channels

Claim Term	Net Nav.’s Proposed Constr.	Def.’s Proposed Constr.
wherein, in at least one of the first and second flows, data are transferred in frames, and each frame is processed by a	every frame in one flow is processed by one of the processing channels; at least one frame in the flow is	[wherein, in at least one of the first and second flows, data are transferred in frames, and each frame is processed by a

<sup>5</sup> Although Figure 1.7 depicts an “IP datagram” as being encapsulated within an “Ethernet frame,” the reference makes clear that the “IP datagram” is a “packet”: “To be completely accurate in Figure 1.7 we should say that the unit of data passed between IP and the network interface is a *packet*. This packet can be either an IP datagram or a fragment of an IP datagram.” *Id* at 9.

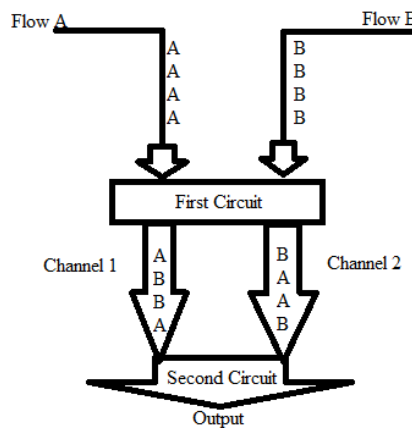
single one of the processing channels but at least two of the frames are processed by two different processing channels	processed by a different processing channel than at least one other frame in the flow	single one of the processing channels, but] frames that belong to the same flow are simultaneously processed by different processing channels
wherein in at least one of the first and second flows data are transferred in frames, and the first circuit is to dispatch each frame to a single one of the processing channels but to dispatch at least two of the frames to two different processing channels	one circuit assigns all frames in one flow to processing channels, such that every frame in the flow is assigned to one processing channel, but at least one frame in the flow is assigned to a different processing channel as another frame in the flow.	[wherein in at least one of the first and second flows data are transferred in frames, and the first circuit is to dispatch each frame to a single one of the processing channels but] frames that belong to the same flow are dispatched for simultaneous processing by different processing channels

The parties’ constructions for this pair of lengthy terms boil down to the same issue—whether or not Defendants’ proposed extraneous limitation requiring “frames that belong to the same flow are *simultaneously processed* by different processing channels.” Net Navigation agrees that, for one flow, some frames in the flow must be processed by different processing channels. Net Navigation disagrees that processing of data from the *same flow* must occur *simultaneously*. First, none of the disputed claim language requires “simultaneous processing,” and more importantly, none of the disputed claim language requires “simultaneous processing” of frames that belong to the *same flow*. Second, Defendants’ proposed construction improperly seeks engraft an inherent characteristic of one embodiment in the specification. However, Defendant’s attempt is improper because such limitation is “not required by *every embodiment*.” *Woodrow Woods*, 2012 U.S. App. LEXIS 18227 (Ex. L) at \*27 (refusing to read a limitation into a term where the “limitation [is] not required by every embodiment”). The specification discloses embodiments which do not require that frames from the same flow be processed simultaneously by different processing channels. Defendants’ attempt to import limitations applicable to less than all disclosed embodiments on unrelated claim language is incorrect and should be rejected.

Net Navigation’s construction for this term clarifies the limitations recited in the claim language itself. The claims merely requires that, for one data flow, each individual frame in the

data flow is assigned to a processing channel; however, one of the frames in the flow must be assigned to a different processing channel than another frame in the data flow. Defendants appear to agree, but seek to add an additional requirement that “frames that belong to the same flow are dispatched for simultaneous processing.” This proposed addition is neither helpful nor accurate.

The following figure illustrates the error in Defendants’ proposed construction with respect to Claim 14:



Claim 14 requires “a first circuit for dispatching data from the one or more first data flows to multiple processing channels.” In the above figure, two data flows, “Flow A” and “Flow B” are fed to the “First Circuit” box, which then dispatches the frames to Channel 1 and Channel 2. Claim 14 next requires “a second circuit for receiving data processed by the processing channels and for dispatching the processed data into the one or more second flows on the one or more ports.” This element corresponds to the large arrow labeled “Second Circuit,” which dispatches the processed data to the “output” ports. The final element, and the term here disputed by the parties, states, “wherein, in at least one flow of the first and second flows, data are transferred in frames, and the first circuit is to dispatch each frame of said one flow to a single one of the processing channels, but to dispatch at least two of the frames of said one flow to two different processing channels.” Under Net Navigation’s construction this element is met because every frame of Flow A is sent to one processing channel: two frames are sent to Channel 1 and two

frames are sent to Channel 2, and not all frames are sent to the same processing channel. As such, the illustrated system is consistent with the plain language of Claim 14.

Ignoring the plain language of the claim, Defendants' proposed construction improperly seeks to exclude the system depicted above. Overall, Defendants want to exclude systems that simultaneously process frames from *different* flows at the same time, which is not supported by the intrinsic record. Defendants argue that the claim is not met because at each point in time the channels are processing one frame from Flow A and one frame from Flow B, but there is no "simultaneous processing" of "frames that belong to the same flow" during all points in time. Defendants' perverse and nonsensical construction is therefore contrary to the plain language of '145 patent. For example, although independent claims 1 and 5 require "processing data in parallel," independent claims 14 and 19 have no such requirement and do not use the term "parallel" at all. The explicit language of the term Defendants purport to construe contains no language requiring parallel processing; the language only requires processing using multiple channels. And, most importantly, *none* of the claims of the '145 patent require processing data of frames in the *same flow* in parallel.

Defendants' proposed construction ignores the teachings of the patent specification. The '145 Patent states that in "some embodiments, a first flow of data is received on a first network port by a first circuit. The first circuit dispatches received data to different processing channels so that different channels process different pieces of data in parallel." '145 patent, col. 1:36-41. Some claims of the '145 patent, such as Claim 1 explicitly require processing data in parallel. *Id.* at Claim 1. In embodiments that receive only one flow, processing data in parallel will imply processing data from the same flow in parallel because only data from one flow is available for processing. However, the '145 patent explicitly recognizes that the invention is applicable to embodiments that receive more than one flow. *Id.* at col. 3:19-20 ("In some embodiments, multiple flows are transferred through a single port"); *id.* at col. 8:17-18 ("in some embodiments the system 110 has multiple ports"). Net Navigation's construction is consistent with the

specification, which consistently describes simultaneous operation of the processing channels rather than simultaneous processing of frames in a single flow. For example, the specification states that “some embodiments” use “multiple data processing channels in parallel to increase the total data processing throughput.” *Id.* at col. 1:29-34. The specification explains that data can be dispatched “to different processing channels so that different channels process different pieces of data in parallel.” *Id.* at col. 1:38-41. While, the patent describes simultaneous operation of the processing channels, it nowhere requires simultaneous processing of data from a single flow.

Defendants’ construction applies a situation inherent in a specific embodiment having only one input flow across all embodiments. This is improper. Claim language is given the ordinary and customary meaning understood by a person of ordinary skill in the art. *Phillips*, 415 F.3d at 1312-13. Furthermore, “although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.” *Id.* at 1323. Here, Defendants limitation is only relevant to single flow, not multiple flow, embodiments. *Woodrow Woods*, 2012 U.S. App. LEXIS 18227 (Ex. L) at \*27 (refusing to read a limitation into a term where the “limitation [is] not required by every embodiment”); *see also Scanner Techs. Corp. v. ICOS Vision Sys. Corp. N.V.*, 365 F.3d 1299, 1305 (Fed. Cir. 2004) (refusing to construe claims to include a limitation where there was no “a clear intent” that the limitation must be “in every embodiment”). The Court should give this term the ordinary and customary meaning evidence by the language of the claim itself, as Net Navigation properly proposes.

#### 4. Disputed Term: Data Flow[s] / Flow[s]

Claim Term	Net Nav.’s Proposed Constr.	Def.’s Proposed Constr.
data flow[s] / flow[s]	stream[s] of data traveling between two devices in a network	an ordered group of related data units

As discussed for the ‘860 patent above, *infra* at 17-18, Net Navigation’s proposed construction is consistent with the definition from Defendant Cisco’s published dictionary definition reciting “Streams of data traveling between two endpoints across a network.” *Cisco*

*Systems' Dictionary of Internetworking Terms and Acronyms* (Ex. E) at 146. Defendants' construction is improper here because it is contrary to the teaching of the specification, which states, "In *some embodiments*, the data ordering is maintained as if the data were processed sequentially by a single processing channel." '145 patent, col. 3:19-20. However, it is improper to read a "limitation into the term merely because it is disclosed in *some embodiments*." *Woodrow Woods*, 2012 U.S. App. LEXIS 18227 (Ex. L) at \*28 (emphasis added). Furthermore, in Claim 1 there is no mention of ordering or any requirement that ordering be preserved. Moreover, dependent claim 3 explicitly requires that data be transmitted "in the same order in which the data were received in said at least one first data flow." '145 patent at Claim 3. As such, the doctrine of claim differentiation further demonstrates that Defendants' attempt to import an "order" requirement on all data flows is improper. "[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Phillips*, 415 F.3d at 1315. Defendants' proposed construction, which is contrary to the intrinsic evidence, contrary to the ordinary and customary meaning and violates the principal of claim differentiation, should therefore be rejected.

**E. U.S. Patent No. 6,625,122**

**1. Technical Background of the '122 Patent**

The '122 patent relates to an apparatus and method for selecting data for transmission in network devices. *See* '122 patent at 1:7-8. Data transmission in networks is often subject to certain bandwidth requirements. *Id.* at 1:9-10. For example, on a network voice-over IP channel ("VOIP"), data may have to be transmitted at exactly 64 kilobits per second ("Kbps"). *Id.* at 1:9-11. Or, a network user may have contracted with a network service provider for a minimum or maximum amount of data bandwidth. *Id.* at 1:11-13. The network provider must then limit the user's data rates to these bandwidth parameters. *Id.* at 13-15.

The network device described by the '122 patent stores network data in computer storage, or memory. *Id.* at 2:22-24; 2:43-45. This memory can be comprised of either queues or non-

queue data structures. *Id.* Typically, if the total bandwidth of the network device is high, a large amount of memory is usually required. *Id.* at 2:7-24. This can increase the size, cost, and power dissipation of the network device. *Id.* Among other advantages, the invention of the ‘122 patent reduces the number of queues required during the operation of the network device, reducing the amount of memory typically required. *Id.* at 2:25-49.

In a preferred embodiment, the ‘122 patent describes the use of a type of data flow called a virtual connections (“VCs”) that share an output port on the network switch. *Id.* at 2:63-66.<sup>6</sup> Each VC, or data flow, is represented by a data structure in the memory of the network device. *Id.* at 2:66-67. Moreover, each VC, or data flow, is associated with a bandwidth parameter. *Id.* at 3:13-17.

Again in the preferred embodiment, the VCs, or data flows, are placed into a plurality of queues. *Id.* at 3:1-3. The VCs, or data flows, are then transferred from these queues to a second queue referred to in the preferred embodiment as the “active queue.” *Id.* at 3:3-18. The preferred embodiment teaches that the frequency in which the data flow is transferred from the first set of queues to the active queue can be based on several factors, including the bandwidth requirement of the data flow. *Id.* at 3:13-5:45. The invention of the ‘122 patent thus allows the network switch to guarantee a minimum bandwidth as well as to limit the maximum bandwidth, while at the same time limiting the size of the memory required. *Id.* at 6: 21-14.

Net Navigation is asserting independent claims 13 and 17 of the ‘122 patent, each of which is implicated by one or more of the disputed terms. Claim 13 is an apparatus claim, and claim 17 is a method claim. Net Navigation is also asserting dependent claims 14 and 19.

## 2. Disputed Term: data flow[s] / flow[s]

Claim Term	Net Nav.’s Proposed Constr.	Defendants’ Prop. Constr.
data flow[s] / flow[s]	stream[s] of data traveling between two devices in a network	any data transmission that can be assigned a bandwidth and can compete for bandwidth

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<sup>6</sup> As the ‘122 patent specification teaches, though, “[t]he invention can be applied to data flows other than VCs.” ‘122 patent at 2:46-47.



		with other transmissions
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“Data flow” is a common and well understood term in the networking field. One of ordinary skill in the art would understand “data flow” to mean a “stream of data traveling between two devices in a network.” Even the intrinsic evidence of the ‘122 patent supports this construction:

Further, the invention is not limited to ATM [asynchronous transfer mode]. In some embodiments, each structure 120 represents a non-ATM data flow or flows. We use the term “data flow” to denote any data transmission that can be assigned a bandwidth and can compete for bandwidth with other transmissions. For example, a VP [virtual path] is a data flow. Each VC [virtual connection] within a VP is also a data flow. **Another example of a data flow is a flow of IP packets having a predetermined source address and a predefined destination address.** Another example is a flow of data on a TCP connection or a group of TCP connections. Other examples are possible.

‘122 patent, col. 6:26-36 (emphasis added).

As the Court will appreciate, Defendants’ proposed construction is taken from the above-cited portion of the specification, as being “any data transmission that can be assigned a bandwidth and can compete for bandwidth with other transmissions.” The problem with Defendants’ construction, though, is that taken out of context, it potentially excludes the other embodiments described by the specification. Critically, any construction of the term “data flow” that would exclude the embodiment whereby a “data flow” is “a flow of IP packets having a predetermined source address and a predefined destination address” would be improper. The Federal Circuit has held that “there is a strong presumption against a claim construction that excludes a disclosed embodiment.” *In re Katz Interactive Call Proc. Patent Litig.*, 639 F.3d 1303, 1324 (Fed. Cir. 2011). Indeed, a construction “that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.” *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007)).

Moreover, the term “data flow” appears in the claims of the ‘860 patent and the ‘145 patent as well. As a result, the term “data flow” in the ‘860 patent and the ‘145 patent should consistently be construed as “stream of data traveling between two devices in a network.” As

explained above, the specification plainly anticipates that “data flows” be construed broadly enough to include virtual paths, virtual connections, and IP packets having a predetermined source address and a predefined destination address. Defendants’ invitation to the contrary must be rejected.

**3. Disputed Terms: bandwidth / bandwidth requirement / bandwidth to be given**

<b>Claim Term</b>	<b>Net Nav.’s Proposed Constr.</b>	<b>Defendants’ Prop. Constr.</b>
bandwidth	transmission capacity	bits-per-second
bandwidth requirement	specified transmission capacity	predetermined specified bandwidth
bandwidth to be given	predetermined specified transmission capacity	the allocated percentage of the total bandwidth

The term “bandwidth” is a commonly understood term in this day and age that is easily understood by members of the jury. As a result, no construction is necessary. To the extent that the Court feels that a construction is warranted, the term “bandwidth” should be given its plain meaning construction of “transmission capacity.” Likewise, in order to avoid juror confusion, the related terms “bandwidth requirement” and “bandwidth to be given” should be given similar constructions of “specified transmission capacity” and “predetermined specified transmission capacity”, respectively.

The ‘122 patent specification uses “bandwidth” consistent with its plain and ordinary meaning. *See*, ‘122 patent col. 1:11-15 (“a network user may have contracted with a network service provider for a minimum and maximum bandwidth parameters. [sic] The network provider must limit the user’s data rates to these bandwidth parameters.”); col. 2:7-10 (“The inventor has observed that if the total bandwidth of port 130 is high but the minimal supportable bandwidth for an individual VC is allowed to be low, the cell scheduling method of FIG. 1 can require a large number of queues 160.”) Construing “bandwidth” as meaning “transmission capacity” is likewise supported by extrinsic evidence. *See Cisco Systems’ Dictionary of Internetworking Terms and Acronyms* (Ex. L) (noting that “bandwidth” is “used to describe the rated throughput capacity of a given network medium or protocol.”); *Microsoft Internet &*

*Networking Dictionary* (Ex. M) (defining “bandwidth” as “The data transfer capacity, or speed of transmission, of a digital communications system as measured in bits per second (bps).”

Defendants’ proposed construction of “bits-per-second” is apparently taken from a misinterpretation from a line in the specification which states: “Data transmission in networks may be subjected to some bandwidth (*i.e.*, bits-per-second) requirements.” ‘122 patent, col. 1: 8-9. This should not, as Defendants will likely argue, be interpreted as a unique definition of “bandwidth.” Indeed, as the specification later points out, “bits-per-second” is how bandwidth is *measured*, not defined. *Id.* col. 2:16-18 (“where TB is the total bandwidth of port 130 and mb is the minimum bandwidth supported by the ATM switch (**here the bandwidth is measured in bits per second**.” (emphasis added)). How something is measured cannot be the definition of the thing itself, just as it would be improper to define “temperature” as “degrees.” Here, because bandwidth is measured in bits-per-second, it would be improper to construe bandwidth as *being* bits-per-second.

Defendants’ proposed construction of “bandwidth requirement” as “predetermined specified bandwidth” is likewise erroneous, as the proposed construction improperly adds the limitation of “predetermined.” (The parties agree on the use of “specified.”) “Bandwidth requirement” should be construed consistently with “bandwidth” and given the construction “specified transmission capacity” as Net Navigation proposes.

Lastly, the term “bandwidth to be given” should also be construed consistently with “bandwidth” as being predetermined specified transmission capacity, as Net Navigation proposes. Defendants’ proposed construction of “the allocated percentage of the total bandwidth” imports improper limitations relating to an “allocated percentage” that should be rejected.

### III. CONCLUSION

Net Navigation respectfully requests that the Court adopt Net Navigation’s proposed claim constructions and reject Defendants’ erroneous constructions for the reasons stated herein.

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**CERTIFICATE OF SERVICE**

I hereby certify that on October 10, 2012, I electronically filed the foregoing filing with the Clerk of Court using the CM/ECF system which will send notification of such filing *via* electronic mail to all counsel of records.

/s/ M. Brett Johnson

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